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09/601,233	07/31/2000	ANDREW AUGUSTINE WAJS	82032-00002	8738

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EXAMINER

ZAND, KAMBIZ

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 03/03/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/601,233

Applicant(s)

WAJS ET AL.

Examiner

Kambiz Zand

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-17, 19-25 and 28 is/are rejected.
- 7) ☒ Claim(s) 7-11, 18, 26, 27 and 29-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 . 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. **Claims 1-31** have been examined.

***Information Disclosure Statement PTO-1449***

2. The pages of the all references submitted by applicant have been considered.

***Claim Objections***

3. Claims 1-31 are objected to because of the following informalities: Examiner suggests the removal of all parentheses and the reference numbers within the parenthesis from the claim language. Appropriate correction is requested.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 15-16 recites the limitation "the digital message" in the claim. There is insufficient antecedent basis for this limitation in the claim.

7. **Regarding claim 31**, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claim 1-2, 12, 14, 20, 21 and 28** are rejected under 35 U.S.C. 102(b) as being anticipated by Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) recited in the IDS, paper number 4 by Applicant.

**As per claims 1 and 12** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach a system for processing an information signal (see page 219, introduction, first paragraph where a system process information signals such as video-on-demand, digital video, interactive video game and where multimedia applications operates on audio and video, etc.), comprising a system for scrambling the information signal (see page 223, paragraph 2 of section 4.1 MPEG and JPEG image security, "the

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encrypted (or scrambled) image has...obscured image") and at least one system for descrambling the scrambled information signal (see abstract; section 4.1 and 4.2 on page 223 that is self explanatory with respect to a system that decrypt (descramble, the scramble signal)), said scrambling system comprising:

means for analysing the entropy distribution of the information signal (see page 222, right column, first paragraph where the MPEG-1 uses to compress video data is entropy coding of distribution of signal by using Huffman coding), means for scrambling the information signal in dependence on the entropy distribution of the information signal to provide a scrambled information signal having an entropy distribution corresponding with the entropy distribution of the information signal and means for compressing the scrambled information signal (see section 4, 4.1-4.4 on pages 223-225 where by incorporating of compression and encryption using MPEG and JPEG image security the information are encrypted/scrambled and compressed based on MPEG-1 as an option as described on page 222 using Huffman coding), said descrambling system comprising means for decompressing the compressed scrambled information signal (see page 223, section 4.2 where the system goal is "...to achieve compression (decompression) and encryption (decryption) in one step"), and means for descrambling the scrambled information signal to provide the information signal (see page 223, section 4.2). Also see pages 219-229 for more detail.

**As per claims 2 and 14** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach a system for descrambling a scrambled information signal (see

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abstract; section 4.1 and 4.2 on page 223 that is self explanatory with respect to a system that decrypt (descramble, the scramble signal)), comprising means for descrambling the scrambled information signal to provide the information signal (see page 222, section 4.2; and see page 223, section 4.2 where the system goal is "...to achieve compression (decompression) and encryption (decryption) in one step"), wherein said descrambling means comprises means for regenerating the scrambling signal as a descrambling signal and means for combining the descrambling and scrambled information signals to obtain the information signal (see page 219-220 where the descrambling of the scramble signal and decompression is being done in one step; and page 222, section 3 "related works" disclose that some of the information in the signal not needed to scramble and that is the idea of selective scramble or encryption and therefore the descrambling of the scramble signal yields to a part of signal initially scrambled and combination of the descramble part with the original signal yields to information signal). Also see pages 219-229 for more detail.

**As per claims 20-21** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach a system according to claims 14, wherein the scrambled information signal is compressed and decompressed, wherein the regenerating means comprises means for equalizing the descrambling signal to compensate for compressing and decompressing of the original scrambling signal contained in the scrambled information signal; , wherein the equalizing means is adjustable by said controlling means, said controlling means being adapted to measure the impulse

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response of the compressing and decompressing operations and to adjust the equalizing means to provide a corresponding impulse response (see page 219, abstract where the method is based on jpeg and MPEG; section 1.1, introduction, line 1, second paragraph, section 2.1 and 2.2 and section 4.1).

**As per claim28** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach a system according to claim 12 for scrambling still images, wherein the image information is divided in blocks and each block is transformed to obtain a set of coefficient, wherein the analyzing means analyses the entropy distribution of the transformed image information and provides the scrambling control information, wherein the generating means generates noise in a two dimensional space and wherein the processing means provides a filtered noise signal as scrambling signal (see page 220-222, section 2.1 "discrete cosine transformation").

Also see the entire reference with respect to the limitations of the above claims.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 3-6, 13, 15-17, 19, 22-23 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) recited in the IDS, paper number 4 by Applicant, in view of Rhoads (6,567,533 B1).

**As per claims 3-4, 13, 15, 19** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach all limitation of the claim a system according to claims 2, 12 and 14, wherein said analysing means provides scrambling control information but do not disclose generating means generates a noise signal and comprises means for processing said noise signal as controlled by the scrambling control information to obtain the scrambling signal, wherein said scrambling control information is transferred to the descrambling system, wherein said regenerating means generates a noise signal and comprises means for processing said noise signal as controlled by the scrambling control information to obtain the descrambling signal; wherein the scrambling control information is transferred to the descrambling system as part of the information signal. However Rhoads (6,567, 533 B1) disclose generating means generates a noise signal (see fig.6, items 202 and 222; fig.7, item 206 and 242, fig.8 and fig.29) and comprises means for processing said noise signal as controlled by the scrambling control information to obtain the scrambling signal (see fig.7 where the noise source is processed as a code and encoded by item 202 to provide scrambling or encoding signal output), wherein said scrambling control information is transferred to the descrambling



system, wherein said regenerating means generates a noise signal and comprises means for processing said noise signal as controlled by the scrambling control information to obtain the descrambling signal; wherein the scrambling control information is transferred to the descrambling system as part of the information signal (see col.17, lines 26-67 and col.18, lines 1-54 where different methods of decoding of a signal that has embedded noise signal is discussed in detailed). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rhoads 's noise signal generation in scrambling system of Lei Tang in order to trace pirated knock-offs to the original from which they were made in addition to protect data streaming piracy data such as music and videotape recording.

**As per claims 5, 16** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach all limitation of the claim of a system according to claims 3 and 15 but do not disclose a white noise generator and filtering means controlled by said scrambling control information to filter the white noise to obtain noise having an entropy distribution corresponding with the entropy distribution of the information signal. However Rhoads (6,567, 533 B1) disclose a white noise generator and filtering means controlled by said scrambling control information to filter the white noise to obtain noise having an entropy distribution corresponding with the entropy distribution of the information signal (see col.23, lines 45-67 and col.24, lines 1-38 where the regeneration of white noise and the filtering technique is detailed). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rhoads 's noise

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signal generation in scrambling system of Lei Tang in order to provide more absolute signal strength to the identification signal relative to the perceptibility of that signal.

**As per claims 6 and 17** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach all limitation of the system according to claims 3 and 15, but do not disclose a narrow band noise signal generator and modulating means for modulating the narrow band noise signal controlled by said scrambling control information to obtain noise having an entropy distribution corresponding with the entropy distribution of the information signal. However Rhoads (6,567, 533 B1) disclose a narrow band noise signal generator and modulating means for modulating the narrow band noise signal controlled by said scrambling control information to obtain noise having an entropy distribution corresponding with the entropy distribution of the information signal (see col.18, lines 36-67; col.19, lines 1-15). ). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rhoads 's noise signal generation in scrambling system of Lei Tang in order to trace pirated knock-offs to the original from which they were made in addition to protect data streaming piracy data such as music and videotape recording.

**As per claim 22** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach all limitation of the claim of system according to claim 14, but do not disclose at least a part of the regenerating means, in particular the noise signal generator, is accommodated in a secure device, for example a smart card. However

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Rhoads (6,567, 533 B1) disclose at least a part of the regenerating means, in particular the noise signal generator, is accommodated in a secure device, for example a smart card (see claim 1 above and fig.24). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rhoads 's noise signal generation in a smart card in Lei Tang's method and system in order to trace pirated knock-offs to the original from which they were made in addition to protect data streaming piracy data such as music and videotape recording.

**As per claim 23** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach all limitation of the claim of a system according to claim 22, but do not disclose the secure device is adapted to add a watermark signal to the descrambling signal. However Rhoads (6,567, 533 B1) disclose the secure device is adapted to add a watermark signal to the descrambling signal (see abstract where it state that the technology also could be used in watermarking). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rhoads 's noise signal generation in a smart card in Lei Tang's method and system in order to trace pirated knock-offs to the original from which they were made in addition to protect data streaming piracy data such as music and videotape recording.

**As per claim 24** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach a system according to claim 22, wherein the secure device is adapted to add a compression hindering signal to the descrambling signal (see page 223-226).

**As per claim 25** Lei Tang (Method for Encrypting and Decrypting MPEG Video Data Efficiently) teach all limitation of the claim of the system according to claim 14, but do not disclose the scrambled information signal and the descrambling signal are digital signals, wherein means are provided for converting the scrambled signal and the descrambling signal into analog signals, wherein the combining means combine the analogue signals to obtain a clear analogue information signal. However Rhoads (6,567, 533 B1) disclose the scrambled information signal and the descrambling signal are digital signals, wherein means are provided for converting the scrambled signal and the descrambling signal into analog signals, wherein the combining means combine the analogue signals to obtain a clear analogue information signal (see col.16, lines 27-61 where the system is capable of digital to analog conversion and vice versa). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Rhoads 's noise signal generation in scrambling system of Lei Tang in order to trace pirated knock-offs to the original from which they were made in addition to protect data streaming piracy data such as music and videotape recording either in analog or digital format.

***Allowable Subject Matter***

Claims 7-11, 18, 26, 27 and 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. US (5,862,260 A) teach methods for surveying dissemination of proprietary empirical data.

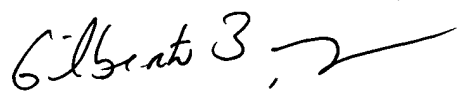
U.S. Patent No. US (6, 618,484 B2) teach steganographic techniques for securely delivering electronic digital rights management control information over insecure communication channels.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (703) 306-4169. The examiner can normally be reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

Official  
  
Kambiz Zand

(703) 872-9306

02/26/04

  
GILBERTO BARRON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100